

Abstract

An automatic rivet loading module which includes a pusher mechanism, a gripper mechanism, a mandrel receptacle, mechanisms for moving mandrels in the mandrel receptacle, and a tool activation device. The gripper mechanism receives a rivet, and a mandrel is moved through the rivet such that the rivet threads onto the mandrel. The gripper mechanism moves out of the way while the pusher mechanism pushes the mandrel down. The pusher mechanism then retracts, and the gripper mechanism closes and is ready to receive another rivet. This process is repeated until the mandrel is full of rivets. The mandrel receptacle is rotatable such that the loaded mandrel swings to a position under the tool activation device to be loaded into a rivet tool. As the loaded mandrel is swung under the tool activation block, a new mandrel is swung under the gripper mechanism, in position for loading with rivets.